

**Jet Propulsion Laboratory**

**INTEROFFICE MEMORANDUM**

930-04-006-NL/ESB: lc

June 22, 2004

**TO:** J. A. Wackley

**FROM:** E. S. Burke

**SUBJECT:** Minutes for the DSS-14 Downtime Readiness Review (DTRR) held June 7, 2004.

**DSS-14 Downtime Readiness Review**

The DSS-14 Downtime Readiness Review (DTRR) was held on June 7, 2004 at JPL in Building 238-543 with Goldstone staff participating. The DTRR Review Board consists of the following:

**Review Board**

Gene Burke, Chairman.....	DSMS Operations, DSN RAPSO Manager
Wayne Sible .....	DSMS Implementation Engineering
Jim Buckley .....	DSMS Operations Representative
Mark Hayes.....	ITT, O&M Contractor Engineering Manager
Fred Battle.....	DSMS Safety Engineer
Jean Patterson .....	Antenna Maintenance Specialist, Div 33 Technical Representative
Bob Haroldsson.....	GDSCC Representative
Napoleon Lacey .....	Board Secretary

**Attendees**

Ahlstrom, Hal	Haroldsson, Bob	Sink, Tim
Almassy, Bill	Hayes, Mark	Sosnowski, John
Battle, Fred	Kwok, Jaclyn	Strain, Martha
Berg, Martha	Link, Chris	Swink, Robert
Bitter, Kirk	Liu, Jun	Valtier, Henry
Bratzler, David	Manalo, Leslie	Van Sickler, Peter
Buckley, Jim	Mason, John	Watzig, Gary
Burke, Gene	Miyazono, Calvin	Welch, Susan
Bryan, Rudy	Morgan, Scott	Welizkin, Mark
Coluzzi, Michael	O'Dea Andrew	Wert, Mike
Cucchissi, John	Osman, Jeff	Williams, Keith
Dodge, Tom	Rascoe, Dan	Winders, Michael
Feria, Alfonso	Rockwell, Steve	Wolfenbarger, Mariam
Flores, Jerry	Shimizu, Ken	Zia, Susan
Hames, Peter	Sible, Wayne	

**Introduction** – *G. Burke*

Mr. Burke introduced the Downtime Readiness Review Board and reviewed the downtime readiness criteria.

**DSS-14 Downtime Overview** – *S. Morgan*

The DTRR will review and assess the readiness for all activities planned for the tasks scheduled to begin between July 7 and December 7, 2004.

**Review Criteria** – Test plan(s), designs, and procedures have been deemed sufficient to adequately test the subsystem(s) and their interfaces. Test procedures, test equipment, input simulators, test facilities, and test teams are ready to begin testing.

**Agenda/Schedule**

- **ACR Task Status:**
  - Hardware Modkit Status – *H. Ahlstrom*
  - Software Modkit Status – *M. Strain*
  - Test Plans and Status – *K. Shimizu*
  - OE Status Report – *M. Wert*
- **HBA Upgrade Task Status:**
  - Hardware Modkit Status – *J. Liu*
  - Software Modkit Status – *H. Ahlstrom*
  - Test Plans and Status – *J. Liu*
  - OE Status Report – *K. Williams*
- **Integrated Schedule** – *H. Ahlstrom*
- **Board Discussion**

**Review Scope** – The DSS-14 downtime is from July 7, through December 7, 2004. This review is limited to the status of the Antenna Controller Replacement (ACR) task and the Hydrostatic Bearing Assembly (HBA) upgrade task. The review content is specified by 813-101.

**Associated Tasks** – Several NIB tasks are scheduled to be completed during the downtime which will not interfere with work performed for the ACR and HBA tasks. Among them are the USC Installation, NSP Uplink Integration Testing, NSP D5.3 Uplink and Downlink Acceptance Testing, NMC Installation, and the UWV Switch Installation for GSSR.

**Dependencies** – The ACR installation will require an upgrade to the NSP Downlink software for CONSCAN to function correctly. New support files are required to be delivered to NSS.

**ACR Hardware Modkit Status** – *H. Ahlstrom*

A detailed schedule was presented on the ACR Hardware Modkit Status. There are no outstanding liens on required hardware.

**ACR Software Modkit Status** – *M. Strain*

A plan is in place to fix all open Category 1 anomalies prior to the S/W Test Readiness Review.

**ACR Testing Schedule** – *K. Shimizu*

All of the planned dates for ACR testing are earlier than the stated need date. The test procedure and status schedule was presented.

**ACR OE Status Report** – *M. Wert*

**Summary of Anomalies:** Through completion of version 6.2 pre-acceptance testing, 13 Critical-1 problems were found. There are 13 proposed corrections with version 6.3.

**Status RDD's and SOM/UG:** All seven RDD's have been provided for OE review during performance acceptance testing. Three SOM sections have been provided to OE for review, comments were incorporated, and the AUD upgrade was released.

**Status OTP:** The draft for the 70m task and NOPE review (6/11) contains three days of engineering tracking with CONSCAN enabled. It contains PIT's and demos. The final draft of documentation is expected on June 25 with the final release date to be determined.

**HBA Hardware Modkit Status** – *J. Liu*

A detailed HBA Hardware Modkit Status and HBA Hardware Lien Status Schedule was presented and discussed. There are no outstanding liens on required hardware.

**HBA Software Modkit Status** - *H. Ahlstrom*

No liens are expected regarding the HBA Software Modkit Status.

**HBA Test Plans and Status** – *J. Liu*

HBA Hardware manual testing starts right after the installation from 08/26/04 – 09/14/04. An HBA ALC added function test is planned for 09/22/04 – 09/27/04; and an HBA Acceptance testing is scheduled from 10/15/04 – 10/19/04.

**HBA Safety and Lifting Plans** - *J. Liu*

DSS-14 is drafting the Safety and Lifting Plans. During the hardware installation, the station will have a pre-construction safety briefing at Goldstone; a daily safety meeting; and daily close-out meetings for status assessment.

**HBA OE Status Report** – *K. Williams*

OE and GDSCC schedules were reviewed. The OE and Modkit status are in agreement, pre-installation testing has been completed, MSA listed spares are on site, and all equipment and tools are on site.

**Functional Deferrals:** Lien item – Dehydration CPU, and ISO 220 Oil (delivery pending site request). All sensors presented at CDR are not being monitored.

**Workarounds:** All installed unmonitored sensor connectors need protective covers until hook up made.

**Integrated Schedule** – *H. Ahlstrom*

The schedule developed by JPL CDE's, integrates all planned activities for the ACR and HBA tasks, and includes USC installation activities and multiple reviews by GDSCC engineering staff. The schedule is based on a normal 40 hour workweek, except in a few critical areas when additional shifts are used. Progress reporting will be weekly.

**GDSCC Schedule Commitment** – *B. Haroldsson*

The GDSCC staff believes the schedule as presented is realistic. Unexpected power outages during the installation and test period may impact the available resources. He assumes responsibility for execution of the schedule.

**DTRR Summary** – *S. Morgan*

The tasks are ready to be installed and tested at DSS-14. However, the schedule is very tight. Contingency time is available through the use of additional hours beyond the 40 hour workweek. NIB tasks will be deferred to a later date if the major tasks and testing are in jeopardy of not being completed within the downtime period. Deferment is at our discretion.

**Board Summary:**

The Board reviewed each of the success criteria following the presentation and recommended that DSS-43 begin its downtime as planned. Comments provided by each of the Board Members follow:

Mark Hayes – Proceed with the downtime. He was concerned about the software schedule, the exit ramps, if the s/w testing does not go well, and the criteria for the NIB task.

Jim Buckley – Proceed with the downtime. He suggested a complete list be compiled of all items needing to be accomplished during the downtime. His concern was that all anomalies be clearly known.

Jean Patterson – Proceed with the downtime. The criterion for solving Critical-1 problems prior to the planned downtime was her concern. She would like to see the demo pass list.

Fred Battle – Proceed with the downtime. He is satisfied that the safety plan is in place.

Bob Haroldsson – Proceed with the downtime. He stated that the team is well prepared. He wanted to schedule a telecom ASAP to be assured that the Critical-1 problems would be fixed in time, and requested a PIT's list be published as soon as possible.

Wayne Sible – feels that the success criteria has been met, and agreed to proceed with the downtime. An NSP schedule should be on the Master Schedule. He would like to see a page summary detailing the mitigation of known risk.

Gene Burke – Proceed with the downtime. His concern was also with Critical-1 problems, and the absence of an NSP schedule. There cannot be any modifications to the existing antenna control system until there is a known operating system in the ACR and all Critical-1 problems are cleared and verified, and engineering testing completed. He requested a weekly status report for the Critical-1 problem areas, with all Board Members on copy.

**Action Item Summary:**

1. Andrew O'Dea will develop an NSP D5.3 and V4.1.3 software plan and schedule showing the required dependent delivery to support the ACR delivery.
2. Scott Morgan will initiate a teleconference prior to the DSS-14 downtime to review status of the ACR software and the NSP software delivery plans.
3. The following 2-part Action Item was assigned to Bob Haroldsson in order to address NIB tasks occurring during the DSS-14 downtime should they interfere with completion of either of the main tasks:
  - A. Identify and publish decision criteria for NIB tasks.
  - B. Identify the decision authority for NIB tasks.
4. Hal Ahlstrom has been assigned to include the weather station installation and the NSP installation plan on the integrated schedule.